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RP-1/21-K,ELR-PMP-2<sub>1-22</sub>: Ala Leu Try Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser Leu Lys  
 Arg Leu Gly Ser Asp Asp Pro Lys Glu Ser Glu Gly Glu Leu Arg  
 Cys Val Cys Val Lys Thr Thr Ser Lys Val (SEQ ID NO:106).

In the Claims:

Please amend claims 28-30, 33-35, and 44-52 to read as follows:

28. (Amended) The antimicrobial peptide composition of Claim 26, wherein said peptide contains an amino acid core sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>-aa<sub>16</sub>-aa<sub>17</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide core sequence and is alanine; aa<sub>2</sub> is threonine; aa<sub>3</sub> and aa<sub>4</sub> are lysine; aa<sub>5</sub> is asparagine; aa<sub>6</sub> is glycine; aa<sub>7</sub> is arginine; aa<sub>8</sub> is lysine; aa<sub>9</sub>, aa<sub>11</sub>, aa<sub>13</sub> and aa<sub>17</sub> are leucine; aa<sub>10</sub> is cystine; aa<sub>12</sub> is aspartic acid; aa<sub>14</sub> is glutamine; and aa<sub>15</sub> and aa<sub>16</sub> are alanine (SEQ ID NO:14).

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 29. (Amended) The antimicrobial peptide composition of Claim 26, wherein said peptide contains an amino acid core sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide core sequence and is arginine; aa<sub>2</sub> is phenylalanine; aa<sub>3</sub> is glutamic acid; aa<sub>4</sub> is lysine; aa<sub>5</sub> is serine; aa<sub>6</sub> is lysine; aa<sub>7</sub> is isoleucine; and aa<sub>8</sub> is lysine (SEQ ID NO:15).

30. (Amended) The antimicrobial peptide composition of Claim 26, wherein said peptide contains an amino acid core sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>-aa<sub>16</sub>-aa<sub>17</sub>-aa<sub>18</sub>-aa<sub>19</sub>-aa<sub>20</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is serine; aa<sub>2</sub> is alanine; aa<sub>3</sub> is isoleucine; aa<sub>4</sub> is histidine; aa<sub>5</sub> is proline; aa<sub>6</sub> and aa<sub>7</sub> are serine; aa<sub>8</sub> is isoleucine; aa<sub>9</sub> is leucine; aa<sub>10</sub> is lysine; aa<sub>11</sub> is leucine; aa<sub>12</sub> is glutamic acid;

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aa<sub>13</sub> is valine; aa<sub>14</sub> is isoleucine; aa<sub>15</sub> is cystine; aa<sub>16</sub> is isoleucine; aa<sub>17</sub> is glycine; aa<sub>18</sub> is valine; aa<sub>19</sub> is leucine; and aa<sub>20</sub> is glutamine (SEQ ID NO:16).

33. (Amended) The antimicrobial peptide composition of Claim 32, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is lysine; aa<sub>2</sub> is phenylalanine; aa<sub>3</sub> is lysine; aa<sub>4</sub> is histidine; aa<sub>5</sub> is tyrosine; aa<sub>6</sub> and aa<sub>7</sub> are phenylalanine; aa<sub>8</sub> is tryptophan; aa<sub>9</sub> is lysine; aa<sub>10</sub> is tyrosine; and aa<sub>11</sub> is lysine (SEQ ID NO:18).

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34. (Amended) The antimicrobial peptide composition of Claim 32, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is lysine; aa<sub>2</sub> is glycine; aa<sub>3</sub> is tyrosine; aa<sub>4</sub> is phenylalanine; aa<sub>5</sub> is tyrosine; aa<sub>6</sub> is phenylalanine; aa<sub>7</sub> is leucine; aa<sub>8</sub> is phenylalanine; aa<sub>9</sub> is lysine; aa<sub>10</sub> is phenylalanine; and aa<sub>11</sub> is lysine (SEQ ID NO:19).

35. (Amended) The antimicrobial peptide composition of Claim 32, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is lysine; aa<sub>2</sub> is tryptophan; aa<sub>3</sub> is lysine; aa<sub>4</sub>, aa<sub>5</sub>, aa<sub>6</sub>, aa<sub>7</sub> and aa<sub>8</sub> are tryptophan; aa<sub>9</sub> is lysine; aa<sub>10</sub> is tryptophan; and aa<sub>11</sub> is lysine (SEQ ID NO:20).

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44. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is proline, aa<sub>2</sub> is arginine, aa<sub>3</sub> is isoleucine, aa<sub>4</sub> and aa<sub>5</sub> are lysine, aa<sub>6</sub> is isoleucine, aa<sub>7</sub> is valine, aa<sub>8</sub> is glutamine, aa<sub>9</sub> and aa<sub>10</sub> are lysine, aa<sub>11</sub> is leucine, aa<sub>12</sub> is alanine, and aa<sub>13</sub> is glycine (SEQ ID NO:21).

45. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>-aa<sub>16</sub>-aa<sub>17</sub>-aa<sub>18</sub>-aa<sub>19</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and

is lysine, aa<sub>2</sub> is tryptophan, aa<sub>3</sub> is valine, aa<sub>4</sub> is arginine, aa<sub>5</sub> is glutamic acid, aa<sub>6</sub> is tryosine, aa<sub>7</sub> is isoleucine, aa<sub>8</sub> is asparagine, aa<sub>9</sub> is serine, aa<sub>10</sub> is leucine, aa<sub>11</sub> is glutamic acid, aa<sub>12</sub> is methionine, aa<sub>13</sub> is serine, aa<sub>14</sub> and aa<sub>15</sub> are lysine, aa<sub>16</sub> is glycine, aa<sub>17</sub> is leucine, aa<sub>18</sub> is alanine, and aa<sub>19</sub> is glycine (SEQ ID NO:22).

46. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>-aa<sub>16</sub>-aa<sub>17</sub>-aa<sub>18</sub>-aa<sub>19</sub>-aa<sub>20</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is glutamic acid, aa<sub>2</sub> is tryptophan, aa<sub>3</sub> is valine, aa<sub>4</sub> is glutamine, aa<sub>5</sub> is lysine, aa<sub>6</sub> is tryosine, aa<sub>7</sub> is valine, aa<sub>8</sub> is serine, aa<sub>9</sub> is asparagine, aa<sub>10</sub> is leucine, aa<sub>11</sub> is glutamic acid, aa<sub>12</sub> is leucine, aa<sub>13</sub> is serine, aa<sub>14</sub> is alanine, aa<sub>15</sub> is tryptophan, aa<sub>16</sub> and aa<sub>17</sub> are lysine, aa<sub>18</sub> is isoleucine, aa<sub>19</sub> is leucine, and aa<sub>20</sub> is lysine (SEQ ID NO:107).

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47. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is serine, aa<sub>2</sub> is tryptophan, aa<sub>3</sub> is valine, aa<sub>4</sub> is glutamine, aa<sub>5</sub> is glutamic acid, aa<sub>6</sub> is tryosine, aa<sub>7</sub> is valine, aa<sub>8</sub> is tryosine, aa<sub>9</sub> is asparagine, aa<sub>10</sub> is leucine, aa<sub>11</sub> is glutamic acid, and aa<sub>12</sub> is leucine (SEQ ID NO:108).

48. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>-aa<sub>16</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is alanine, aa<sub>2</sub> is asparagine, aa<sub>3</sub> is serine, aa<sub>4</sub> is glycine, aa<sub>5</sub> is glutamic acid, aa<sub>6</sub> is glycine, aa<sub>7</sub> is asparagine, aa<sub>8</sub> is phenylalanine, aa<sub>9</sub> is leucine, aa<sub>10</sub> is alanine, aa<sub>11</sub> is glutamic acid, aa<sub>12</sub>, aa<sub>13</sub> and aa<sub>14</sub> are glycine, aa<sub>15</sub> is valine, and aa<sub>16</sub> is arginine (SEQ ID NO: 109).

49. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>-aa<sub>16</sub>-aa<sub>17</sub>-aa<sub>18</sub>-aa<sub>19</sub>-aa<sub>20</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is alanine, aa<sub>2</sub> is asparagine, aa<sub>3</sub> is serine, aa<sub>4</sub> is glycine, aa<sub>5</sub> is glutamic acid, aa<sub>6</sub> is glycine,

aa<sub>7</sub> is asparagine, aa<sub>8</sub> is phenylalanine, aa<sub>9</sub> is leucine, aa<sub>10</sub> is alanine, aa<sub>11</sub> is glutamic acid, aa<sub>12</sub>, aa<sub>13</sub> and aa<sub>14</sub> are glycine, aa<sub>15</sub> is valine, aa<sub>16</sub> is arginine, aa<sub>17</sub> is lysine, aa<sub>18</sub> is leucine, aa<sub>19</sub> is isoleucine, and aa<sub>20</sub> is lysine (SEQ ID NO: 110).

50. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is glutamic acid, aa<sub>2</sub> is glycine, aa<sub>3</sub> is valine, aa<sub>4</sub> is asparagine, aa<sub>5</sub> is aspartic acid, aa<sub>6</sub> is asparagine, aa<sub>7</sub> and aa<sub>8</sub> are glutamic acid, aa<sub>9</sub> is glycine, aa<sub>10</sub> and aa<sub>11</sub> are phenylalanine, aa<sub>12</sub> is serine, and aa<sub>13</sub> is alanine (SEQ ID NO:27).

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51. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>-aa<sub>16</sub>-aa<sub>17</sub>-aa<sub>18</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is lysine, aa<sub>2</sub> is phenylalanine, aa<sub>3</sub> is asparagine, aa<sub>4</sub> is lysine, aa<sub>5</sub> is serine, aa<sub>6</sub> is lysine, aa<sub>7</sub> is leucine, aa<sub>8</sub> and aa<sub>9</sub> are lysine, aa<sub>10</sub> is threonine, aa<sub>11</sub> is glutamic acid, aa<sub>12</sub> is threonine, aa<sub>13</sub> is glutamine, aa<sub>14</sub> is glutamic acid, aa<sub>15</sub> is lysine, aa<sub>16</sub> is asparagine, aa<sub>17</sub> is proline, and aa<sub>18</sub> is leucine (SEQ ID NO: 111).

52. (Amended) The antimicrobial peptide composition of Claim 36, wherein said peptide contains the amino acid sequence aa<sub>1</sub>-aa<sub>2</sub>-aa<sub>3</sub>-aa<sub>4</sub>-aa<sub>5</sub>-aa<sub>6</sub>-aa<sub>7</sub>-aa<sub>8</sub>-aa<sub>9</sub>-aa<sub>10</sub>-aa<sub>11</sub>-aa<sub>12</sub>-aa<sub>13</sub>-aa<sub>14</sub>-aa<sub>15</sub>, wherein aa<sub>1</sub> is the amino-terminus of the peptide and is alanine, aa<sub>2</sub> is asparagine, aa<sub>3</sub> is leucine, aa<sub>4</sub> is isoleucine, aa<sub>5</sub> is alanine, aa<sub>6</sub> is threonine, aa<sub>7</sub> and aa<sub>8</sub> are lysine, aa<sub>9</sub> is asparagine, aa<sub>10</sub> is glycine, aa<sub>11</sub> is arginine, aa<sub>12</sub> is lysine, aa<sub>13</sub> is leucine, aa<sub>14</sub> is cystine, and aa<sub>15</sub> is leucine (SEQ ID NO:29).